

Assessment of Small-Scale Private Nursery Enterprises in Ibadan, Oyo State, Nigeria

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Accepted: 10 June 2008 / Published online: 26 June 2008
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Abstract Small-scale private nurseries in Ibadan, Oyo state, Nigeria, are examined with the purpose of identifying policy options that could further enhance development of the enterprises. A random sample of nurserymen operating in the city was interviewed about their reasons for engaging in the nursery business, types of services rendered by the nurserymen to seedling buyers, duration of nursery establishment, mode of land acquisition, species of seedling produced, factors affecting price of the seedling species, and source and cost of labour. Most of the private nurseries were owned by private individuals engaging in the business for reasons including income generation, as a hobby, and for research. Landscaping was the most common service rendered by the nurserymen; other services included maintenance of private gardens, and supply of seedling to individuals and landscaping contractors. Most of the land used for establishing the nurseries was obtained through lease from the government, with some through purchase and family land. Most of the labour was provided by the nurseries operators, employment of family members and some hired labourers. Seedlings of ornamental plants were in highest demand followed by seedlings of horticultural crops, and forest trees. Requirements for the nursery industry to develop further were identified, including land availability and at affordable price, and affordable interest rates charged by financial institutions on businesses loans. Training programs including workshops and seminars are necessary to keep nursery operators abreast with current techniques of seedling propagation as well as record keeping and business principles. Further, the nurserymen need to embark on strategies that add value to their products.

Keywords Seedlings of ornamentals · Land acquisition · Sole ownership · Seedling prices · Labour hiring

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Introduction

Unless an activity is specifically prohibited by law, no line of business is closed to an owner (Holden 1995; Jackson 1997). The contribution of small-scale or private business enterprise to the development of an economy cannot be overemphasized (Tonne 1963; Marsden 1990; Gaye 1996). Firms exist to produce and distribute goods and services needed to satisfy human wants, and generate profit (Tonne 1963; Lipsey and Chrystal 1999). Since human needs or desires are limitless and ever-expanding, there is always opportunity to go into business to supply new goods and services. A number of recent studies have focused on the environmental protection, conservation and sustainability of avenue plants around residential areas. Among these are landscaping (Clamp 1995) and urban forestry (Alberta 1994; Mather 1995; Joshi 1999; Crucible II Group 2000). Awareness on the importance of having plants both inside and outside residential areas is therefore on the increase (Adebanjo et al. 1996). Consequently, seedling production centres or nurseries have been receiving increasing attention and patronage as more people plant trees, shrubs and grasses around their buildings. Ornamental plants provide various benefits to the environment—including protection of soil and buildings—and may be used as hedges which screen or provide privacy, provide edible fruits, and above all beautify the environment (Alberta 1990, 1994; Joshi 1999; Ajewole 2001).

Nursery establishments can generally be grouped into private and public depending on the mode of ownership, size, and ultimate goal of their establishment (Adebanjo et al. 1996). One major distinction between the private and the public nursery is the priority on profit maximization (Mailumo et al. 2006). The motive and goal of any private business enterprise is to make as much profit as possible while the public enterprise has the ultimate motive of catering for the welfare of the masses (Sargent 1993). In either case, commercial nursery establishments are where plants of various species are raised for the purpose of selling to the people. These enterprises deal in the production of seedlings of forestry species and horticultural plants (Alberta 1994; Adams 1999).

Aribisala (1993) observed that all industrial activities are classified into four groups for operational purposes, namely cottage industry, small-scale, medium-scale and large-scale. For the past decade, there has been an emerging interest in small-scale (or smallholder) forestry, including in Nigeria where small-scale enterprises have come to importance in the forestry sector. To the nurserymen, gone are the days when forestry was seen as a business with a long gestation period between the time of investment and the time of dividend. Small-scale nursery establishments are highly profitable business ventures in Nigeria due to the short time between the production and sale of most of the plants involved (Aiyelaja and Larinde 2006). With the establishment of the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), there are sundry opportunities for investors. These include granting access to small-scale business incubation services such as quality assurance and linkage to banks, the college graduate recruitment and training program, encouraging the formation of cooperatives, offering advisory services, linkage to special credit schemes, and foreign financing (Nigeria Embassy in Chile 2000). However, despite the considerable support of the government and

apparent available technologies on tree seedling establishment, the kick-start of small-scale forestry in Nigeria is still very low (Mailumo et al. 2006).

In their socio-economic analysis of tree seedling production in nurseries in Abuja, Federal Capital Territory (FCT), Nigeria, Mailumo et al. (2006) concluded that the business is profitable with the owner realizing an average profit of ₦277,108¹ from an average nursery size of 0.2 ha. They also discovered that the nursery owners realized an average profit of ₦276,108, or ₦1.80 per naira (₦) invested, of which ornamental, shade, fruit and forest seedlings constituted 25%, 21%, 18% and 12% respectively. Hence, if adequately exploited, small-scale private nursery enterprises have the prospect of yielding economic returns to the operators, while also providing environmental benefits. The significant socio-economic factors affecting output of the nursery production identified by Mailumo et al. (2006) include age, household size, marital status, educational background, and years of experience.

A survey reported by Filani et al. (1994) on the business enterprises operating in Ibadan revealed that small-scale business enterprises dominate. This then showed the vital role that small-scale business enterprises have on the economy of Ibadan. The contribution of small-scale private nursery enterprise is not exceptional. Ibadan is ranked as the second largest city in Africa, and has a high population density.

In an economy with a high percentage of working people but with an unemployment problem, there is need for studies that create awareness for people in prospecting the hidden opportunities in the economy in order to ease the pressure on the government for the provision of jobs and create awareness on how people could become self-employed. The seedling production business is a form of self-employment opportunity that generates income with relatively low investment expenditure, and thereby possesses the potential of enhancing the socio-economic aspect of the economy. The nurseries are sited alongside major roads, streams and rivers for easy source of water. This study is therefore conducted to assess the characteristics of small-scale private nursery enterprises in Ibadan with respect to major factors of production, services rendered by the nurserymen, and products sold, as well as factors affecting unit price of seedlings, with the purpose of identifying policy options that could further enhance development of the enterprises.

Research Method

The study was conducted in Ibadan, the capital city of Oyo State, Nigeria. Oyo State is an inland state in south-western Nigeria. According to 2005 census, the population of Oyo state is 7,617,720. The indigenous population mainly comprises the Oyos, the Ibadans and the Ibarapas, all belonging to the Yoruba family and speaking the same Yoruba language. Other people from within and outside the country trade and settle in the state, mostly in the urban areas, prominent of which is Ibadan, reputed to be the largest indigenous city in Africa, south of the Sahara (Akinola 1963; Oyo State

¹ \$US 1 = 120 Nigerian Naira (₦), as of July, 2004. The exchange rate is still about the same rate.

1977). Ibadan was the centre of administration of the old Western Region of Nigeria during the days of the British colonial rule (Ikporukpo 1994).

A survey of nurserymen was conducted using personal interviews. A structured questionnaire was developed, which included questions on demographic information on the nurserymen (name, age, gender, and origin), categories of seedlings produced in the nurseries, services rendered by the nurserymen, cost of production and unit price at which the seedlings are sold, reasons for engaging in the business, years of nursery establishment, mode of land acquisition and expenditures on acquiring land (per annum), and types and cost of labour. The reliability of the questionnaire was tested before administration to the nurserymen by administering to some selected nurserymen after which some questions were reframed, added or removed. Simple random sampling was used to select 22 nurserymen in the city. Data collection was carried out between July and August, 2002. To overcome language problem, and for appropriate understanding of the questions and responses, the questionnaire was read and interpreted to the illiterate nurserymen.

Results

Structure of the Private Enterprise

All respondents had undergone basic informal training through apprenticeship of nursery operations before establishing the nursery business and by working in the family nursery. Through experience, they had established a good reputation with their future customers. About 73% of the respondents operated the business on a full-time basis, and 63% of the nurseries were under sole ownership (Table 1.). About 46% of the respondents engaged in the business as a means of self-employment generation, followed by both profit and hobby with each constituting 22.5%. About two thirds of the nurseries had been established for more than a decade. More than half of the respondents spent between ₦1,000 and ₦5,000 per annum on leasing the land of which the nurseries were established.

There is a scarcity of private land for the establishment of nurseries in Ibadan. Most of the land accessed by the nursery operators was therefore leased from the government.

On the categories of seedling that were produced by the nurserymen, ornamental plants (grasses, shrubs, and trees) ranked highest as a result of its high patronage and accrued profit, while forestry seedling accounted for only 12.5%. Apart from selling of plants, services linked to the seedling production business and rendered by most of the nurserymen included landscaping, maintenance of private gardens, seedling supplies, and wreath making. Landscaping was the most popular of all the services rendered by the nurserymen and constituted 31% of all services.

Types of Nursery Labour

Table 2 presents the labour attributes of private nursery establishments in Ibadan. The nurserymen do most of the task. Family members and hired labours are also

Table 1 Characteristics of the small-scale seedling enterprise in Ibadan, Oyo state, Nigeria

Characteristics	Frequency	Relative frequency (%)
Reason for engaging in the business ^a		
Self-employment	14	45.2
Profit	7	22.5
Hobby	7	22.5
Research	3	9.7
Total	31	100
Duration of establishment (years)		
11–20	8	36.4
> 21	7	31.8
6–10	5	22.7
1–5	2	9.1
Total	22	100
Mode of land acquisition		
Leased from Government	12	54.6
Purchased	5	22.7
Family land	5	22.7
Total	22	100
Categories of seedling produced ^a		
Ornamental seedling	20	62.5
Horticultural seedling	8	25
Forestry seedling	4	12.5
Total	32	100
Expenditures on acquiring land (per annum)		
₦1,000–5,000	18	56.2
₦6,000–10,000	7	21.9
₦11,000–15,000	0	0
> ₦16,000	7	21.9
Total	32	100
Services rendered by the nurserymen ^a		
Landscaping	14	31.1
Seedling supplies	12	26.7
Maintenance of private gardens	10	22.2
Other services	9	20
Total	45	100

^a Multiple responses were possible

employed at peak production periods during the rainy season, mostly between the months of June and August. The majority of hired labourers is temporary. About 36% of the temporary labourers were paid ₦100 to ₦200 per day, which is much less than the government approved ₦7,500 minimum wage per month for all workers in Nigeria.

Table 2 Labour sources and other attributes for private seedling enterprise in Ibadan, Oyo state, Nigeria

Labour characteristics	Frequency	Relative frequency (%)
Types of labour		
Family	7	31.8
Hired	5	22.7
Self	10	45.5
Total	22	100
Status of hired labour		
Temporary	9	69.2
Permanent	4	30.8
Total	13	100
Daily cost of labour (₦)		
100–200	8	36.4
201–400	7	31.8
401–600	5	22.7
601–800	2	9.10
Total	22	100

Factors Affecting Unit Price of Some Seedling Species

Major factors that affected the unit price at which seedlings in various categories were sold in Ibadan nurseries are reported in Table 3. Cost items in seedling productions include both fixed (shed, implements) and variable (manure, labour) costs. Season of the year have the greatest effect on the unit selling price. Other factors include potential of the seedling to survive observed from its physical appearance, the quantity of the species that one is buying, seed or wildling source, and whether a special propagation technique is required (e.g. budding, grafting).

Discussion

The major reason why many of the respondents engaged in seedling production were for employment and income generation. Nevertheless, nursery operators need to have adequate experience on how to propagate and take care of the plants, know the species names, and establish good customer relationships, before establishing a nursery. The more educated the nursery owner is, the greater the production output and quality of the seedlings produced, because since their educational background enables them to adopt new and modern innovations and increase their risk management ability. Furthermore, the longer an individual stays in the nursery occupation, the greater the number and improved quality the tree seedlings they can raise.

In terms of the ownership, sole owners dominated the nursery enterprises included in the study. In some cases, the business was jointly owned by the family members as a result of the land being passed down through inheritance. Advantages

Table 3 Major factors affecting the unit price at which some categories of seedling species were sold in some selected Ibadan nursery establishments

Seedling categories	Seedling species	Unit selling price (Naira)	Major factors affecting unit price of the seedling						
			A	B	C	D	E	F	G
Ornamental plants	Yellow bush	10–20	x			x			x
	Golden palm	200–600		x		x			x
	Bahama grass	100–200			x				x
	Araucaria	15,000–50,000		x		x	x		x
	Thuja	600–1,000		x		x	x		x
	Royal palm	250–500		x		x			x
	King palm	250–500		x		x			x
	Masquerade tree	30–50	x	x		x			x
	Sacred palm	400–1,000		x		x			x
Horticultural trees	Cocoa	50–100		x		x	x	x	x
	Oil palm	100–200		x		x			x
	Coconut	300–600		x		x			x
	Citrus	250–500		x		x	x	x	x
	Pawpaw	50–100		x		x			x
	Mango	250–300		x		x		x	x
	Guava	100–200		x		x		x	x
	Cashew	30–50		x		x	x	x	x
Forestry trees	Eucalyptus	20–30		x		x			x
	Teak	20–30		x		x			x
	Pine	70–100		x		x	x		x
	Gmelina	20–30		x		x			x

(A) Quantity of seedlings purchased by the customer; (B) seedling height; (C) Quantity of 50 kg jute bags; (D) physical appearance and potential to survive after planting; (E) source of propagating materials (stem, bud, seed); (F) special propagation treatment (budding, grafting); (G) season of the year (dry or wet)

of sole proprietorship are that the owner is in total control of the business and is entitled to all the profit. Moreover, running one's own business gives the operator a sense of personal dignity and prestige in the community not attained by any but employees in the very highest ranks. The main disadvantage is that the owner is also solely responsible for all the business losses and debts.

Access to land was noted as a problem for nursery establishment and expansion. Many of the nursery establishments visited were located on government-owned land and paying rents ranging from ₦2,500 to ₦3,500 depending on the size and location of the land. Although, the cost of acquiring the government's land was not too high for the operators, the location and accessibility of the land to customers are other important factors. Land located in commercial areas command more patronage while easy customers' accessibility to land creates good business avenue. It was observed that land in industrial estates is more expensive than that on the

outskirts of the city. Moreover, aside from the high cost, most of the available land in commercial areas is under competition and taken over by other types of business enterprises, thereby making land accessible to nursery operators too small for establishing a nursery. The private land available for seedling nurseries on the outskirts of the city faces higher transportation cost and is distant from the customer base.

The type of labour common to most of the nurseries is owner and family labour. The nurserymen do most of the task and also enlist the family members—including wives, children, brothers and other relatives—in order to reduce expenditure on hired labour. Temporary labourers are only employed when the nursery has become overgrown with weeds and also during the dry season when additional labours are needed for watering the plants. One third of the nurserymen paid ₦100 to ₦200 per day for temporary labour, which is considerably below the government approved ₦7,500 minimum wage per month for all workers in Nigeria. Some well-established nurserymen which run their production on a large scale with sustained contracts have permanent workers whom they pay on a monthly basis.

The types of customers who patronized the nursery establishments cut across all categories of classes in the community. The overriding factors that determine customers' patronage are the economic status, financial returns from trees, interest in having ornamental plants around buildings and along roads, awareness on the environmental benefits derived from having avenue plants, and appreciation of the aesthetic value of the ornamental seedlings.

The majority of the nursery establishments were specialized in production of seedlings of ornamentals. The reason for this was the higher patronage resulting from customer awareness of environmental protection and other benefits of planting trees and plants around living areas, including their aesthetic values. This is supported by Mailumo et al. (2006), who found that ornamental and shade plants recorded higher sales percentages than forest tree seedlings in Abuja (FCT), Nigeria. Moreover, seedlings of ornamentals are easy to raise, are demanded and purchased within a short period of their production and occupy relatively little space in the nursery if well arranged. Also, some species including hedge or fence-line plants which are used to form a boundary or protective fence around a living area, lawn, and garden are purchased in large quantities and are therefore relatively profitable for the nursery operator. The reason for low production of forestry and horticultural seedlings in most of the private nurseries in Ibadan was that the improved and hybrid varieties were raised in large quantities in government institutions including the Forestry Research Institute of Nigeria (FRIN), International Institute of Tropical Agriculture (IITA), National Horticultural Research Institute (NIHORT), National Institute of Forestry (NIFOR), and Institute of Agriculture Research and Training (IAR&T). Each of these government institutions produced a high quality and quantity of forestry and horticultural seedlings in Ibadan and command high demand, thereby crowding out the small-scale private enterprises. According to the study conducted by Ajayi and Babalola (2006) on two government nurseries producing forest tree seedlings for commercial purpose in Ibadan, it was found that 77% of the seedlings produced per hectare at FRIN nursery were forest tree seedlings while horticultural seedling constituted 75% at NIHORT

nursery. The nurserymen also complained of the large space occupied by most of the seedling categories and the longer growing period before plants could be sold. This further gave the government institutions the leading role in the production and sale of forest tree and horticultural seedlings.

Apart from selling of seedlings in nurseries, services rendered by the nurserymen further broaden the scope of the enterprise, and create opportunities for the nurserymen to engage in various business activities and contracts. Landscaping is one such business activity whereby the nurserymen are given contracts to plant ornamental plants including grass, hedge rows and spot plants around living areas and new buildings. Another service is the maintenance of private gardens at an agreed wage and duration of days. In this case, the nurseryman is to prune hedge row plants, cut overgrown grass, replant dead seedlings, and carry out chemical spraying. The tasks are either done personally by the nurserymen or by labourers they hire.

Some of the conclusions drawn from personal interviews of the nurserymen on ways by which they attract customers and gain more patronage into their nurseries are:

- enlightenment and awareness creation on the benefit and importance of having plant in the surrounding;
- possessing and displaying stocks of newly introduced seedling or hybrid and improved seedling;
- giving preferential treatment to customers that maintain constant patronage to the nursery in the form of reduction in the unit price of plants or 'throw-in' extra plants relative to the quantity purchased;
- making contacts with customers, and providing information on the diversity of the seedling species in stock; and
- design and beautification of the frontage of their nursery establishment.

Seedling species newly introduced to an area have the potential to command more patronage and higher prices, as a result of their low abundance in circulation, novelty value and the unavailability of mother plants for large-scale propagation in other nurseries.

Various propagation methods are used in the nurseries including the sowing of seeds, stem cutting, suckers and rhizomes. These are obtained from the mother plants which are also grown and spared in the nursery. In other words, mother plants are used for the propagation of plant species so as to maintain their availability. Budding and grafting are used to maintain the genetic make-up of the source seedlings. The ease of obtaining propagation materials from the mother plant has a substantial effect on the final price at which the seedlings are sold.

Seedling production and sales quantities vary with season of the year. During the dry season, shortage of water leads to water stress of seedlings and this invariably results in low survival rates and hence low patronage of nurseries. During the dry season, the nurserymen reduce their selling prices to dispose of seedlings that are incurring a higher production cost of watering. In contrast, there is a boost in production of seedlings in the rainy season, and more people engage in planting, so

there is increasing demand for the seedlings and subsequently increased general unit selling prices.

Conclusion

The potential of private seedling production as a business enterprise in Ibadan has not been fully exploited. Seedling production in Ibadan is a profitable business. Aside from its potential role of mitigating the ever-increasing problem of climate change and environmental degradation, it also has significant potential of providing reliable job opportunities for young graduates and other people in the society. The following policy implications are drawn to further facilitate the development of nursery business enterprises:

1. Small-scale business enterprises contribute a substantial amount to the development of any economy; therefore, their establishment should be encouraged and necessary provision and assistance given by the government, for example, the allocation of land at affordable prices and implementation of measures to reduce the interest rate charged by the financial institution on the loan given to business enterprises.
2. There is need for an enlightenment program including workshops and seminars to be organized for the nursery operators. The government institutions can assist on this by working in collaboration with the small-scale private nursery operators to keep them abreast of the current means of seedling propagation and management, record keeping and business principles.

Acknowledgements My appreciation goes to Dr. B.O. Agbeja of the Department of Forest Resources Management, University of Ibadan, Nigeria, for supervising the study, and also to all the nursery operators who spared their precious time to respond in the survey.

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